

RESTORING SCHEFFLER CREEK

Seward Elementary School, Seward, Alaska

Scheffler Creek, a small but productive salmon stream in Seward, Alaska, was known by the locals as Fish Ditch, because it is where they fished for Pink and Coho salmon and then dumped the entrails of cleaned fish. No one seemed to care much about Fish Ditch until Marylynn Barnwell's fifth grade class took notice.

In 2008, Marylynn Barnwell, looking for ways to get her students outside and learning about their own environs, and with vital help from Forest Service fisheries biologist Ruth D'Amico, began water quality monitoring and salmon smolt trapping on Scheffler Creek. The creek is near enough to Seward Elementary School so that students can easily walk to it. She knew this section of the creek followed the route of the first Iditarod up from Resurrection Bay, and she was aware of some of the conservation science issues swirling around salmon creeks like hers. It was her students, though, who provided the final impetus to act on behalf of an ailing salmon stream.



In 2010 students noticed an oily smell coming from Scheffler Creek. They had also seen trash—everything from bedsprings to old tires—in the creek bed, and they had heard from people in town that the number of returning salmon to Scheffler Creek had declined. Scheffler Creek, they could see, was neglected and abused. Based on their research and concern, and with school administrative support, students decided to “adopt” the creek in partnership with Resurrection Bay

Coalition volunteers (RBCA) and the Alaska Dept. of Fish and Game (ADFG). The US Forest Service, through D'Amico and ADFG helped students get the tools and protocols they needed to begin a long-term scientific study of Scheffler Creek.

The National Park Service became an active partner, too, providing professional teacher training in place-based education through iTREC! (Iditarod Trail for Every Classroom). iTREC! helped Marylynn and students go the next step with the Seward community and the conservation community to become active conservation volunteers.

Now, every month of the school year students walk to the creek. Wearing rubber boots, they wade in and go to school in the creek's version of an outdoor classroom. They measure O₂ levels, take bacteria counts (which, their data show, are elevated: they don't yet know why but are determined to find out), set live minnow traps, and

hunt for macro invertebrate life. They pick up trash when they see it. But the learning doesn't stop there. They've written letters, hosted a town forum and interviewed townspeople to bring about a greater awareness of conditions at Scheffler Creek.

The team at Seward Elementary School is a key program strength. Marylynn works closely with two other 5th/6th grade teachers, Bob Barnwell and Terri McKnight. Together, they cycle 5th and 6th grade classes through coordinated units on salmon stream ecology, botany and mapping technology.

For the students, Scheffler Creek has become their creek, and they've become creek stewards, going well beyond creek boundaries to protect the salmon. They visited the town hall and the local library. They constructed a creek history in part thanks to interviews with townspeople. They learned that it takes science, law and a great deal of cooperation to protect a creek. What they found initially, and this was a significant hurdle, was a lack of communication among stakeholder groups. They learned that a Kenai Borough ordinance, for example, that protects salmon streams from development specifically excluded stream banks inside Seward boundaries.

With the goal in mind of building public awareness, and bringing groups together, students held a very successful Scheffler Creek Partners Meeting in 2010. It was attended by 17 adults representing volunteer conservation groups, government agencies, and the city, including the head of public works. The meeting got people talking and working together, and it resulted in all kinds of improvements for the creek. The city stopped mowing vegetation to the edge of the banks for the creek. The meeting led directly to the award of a \$25,000 grant from the US Fish and Wildlife Service for re-vegetation. One of the attendees was the president of the Seward Rotary Club who told his business colleagues later, "We need to keep the health of this creek in the hands of those kids—they know what they're doing." Rotary Club members have become active volunteers, providing hot drinks and refreshments on creek days. One Borough Assembly member who attended the meeting called it a "summit" for salmon streams throughout the borough and highlighted the school meeting at the following borough assembly meeting.

Evidence of the students' success abounds. One small but telling change was that Seward officials agreed to change references to Fish Ditch in city documents to the more dignified Scheffler Creek. They were also able to help pass Ordinance 2011, which regulates development near salmon stream banks, at the borough level and were able to stop the cutting of vegetation along stream banks.

Teachers and students hope to continue monitoring and nurturing Scheffler Creek for years to come. Plans for the immediate future include stabilizing creek banks and establishing a local park along the creek that includes signage that tells the history of the creek including joint efforts to protect it.

One of the most important lessons learned by the students from their Scheffler Creek classroom is that there's a role for everyone when it comes to resource

stewardship. They experienced something irreplaceable: how their actions can make a real difference in their community.